



Local forecast by "City, St" or "ZIP"

City, St Go



NCEP Quarterly Newsletter

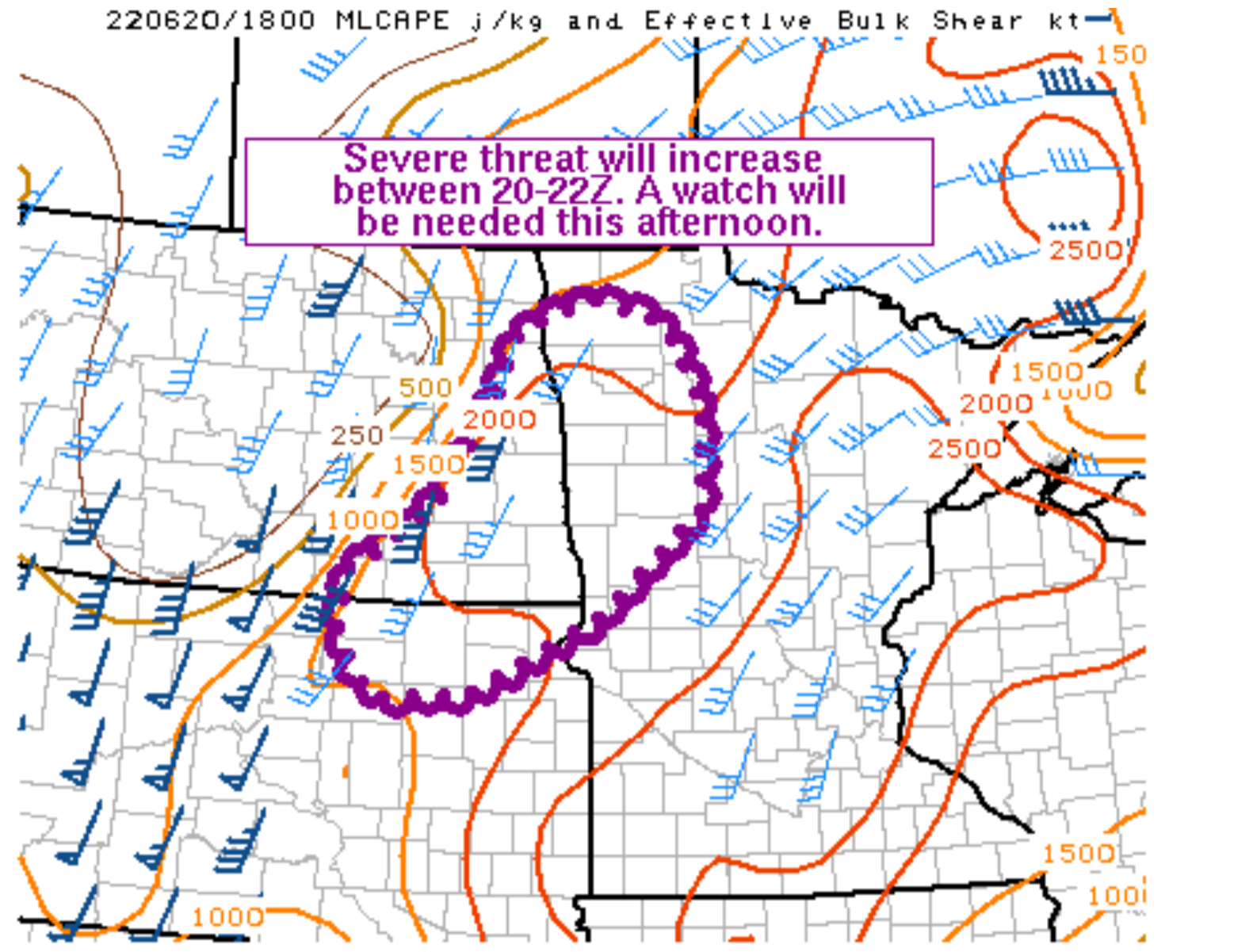
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Mesoscale Discussion 1233

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220620/1800 MLCAPE j/kg and Effective Bulk Shear kt



SPC MCD #1233

Mesoscale Discussion 1233
NWS Storm Prediction Center Norman OK
0149 PM CDT Mon Jun 20 2022

Areas affected...Southeast ND...northeast SD...and parts of northwest MN

Concerning...Severe potential...Watch likely

Valid 201849Z - 202115Z

Probability of Watch Issuance...95 percent

SUMMARY...The severe-storm threat will increase across parts of the northern Plains and Red River Valley between 20-22Z. Large to very large hail, severe gusts (some significant) and a tornado or two will be possible. A watch will be needed this afternoon.

DISCUSSION...Surface observations and MVX radar data depicts a northeast/southwest-oriented quasi-stationary surface boundary extending across the Red River Valley. Ongoing elevated convection and related cloud debris north of the boundary across northeast ND will continue to reinforce the baroclinic zone, while strong diurnal heating of an increasingly moist boundary layer (upper 60s/lower 70s dewpoints) continues along and south of the boundary. As a subtle midlevel impulse evident in water vapor imagery over the western Dakotas overspreads the boundary this afternoon, current thinking is that convection will develop in the 20-22Z time frame.

Regional VWP data shows strong midlevel southwesterly flow approaching the area, which will contribute to 45-55 kt of effective shear amid moderate to strong surface-based buoyancy and steep midlevel lapse rates. While these factors will support organized convection (including initially semi-discrete supercells) along and south of the boundary, largely front-parallel deep-layer flow/shear coupled with the strengthening large-scale ascent could yield congealing cold pools and upscale growth. Large to very large hail and severe gusts will be possible with any supercell structures, and a tornado or two cannot be ruled out owing to modest low-level hodograph curvature. With time, convective clustering amid steep low/midlevel lapse rates could support organized bowing segments/supercell clusters capable of severe gusts (some of which could be significant). A watch will be needed for parts of the area this afternoon.

..Weinman/Grams.. 06/20/2022

...Please see www.spc.noaa.gov for graphic product...

ATTN...WFO...FGF...ABR...BIS...

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47709511 46739511 45819644 45189793 45119907 45629957
46169946

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